OIPE JC13
JUL 0 8 2002
PATENT & TRADEMARK OFFICE

GP 1741

JENKINS & WILSON, P.A.
PATENT ATTORNEYS
SUITE 1400 UNIVERSITY TOWER
3100 TOWER BOULEVARD
DURHAM, NORTH CAROLINA 27707

TELEPHONE (919) 493-8000
FACSIMILE (919) 419-0383

WEBSITE
JENKINSANDWILSON.COM

RALEIGH OFFICE
NCSU CENTENNIAL CAMPUS
VENTURE II SUITE 400
920 MAIN CAMPUS DRIVE
RALEIGH, NORTH CAROLINA 27606

TELEPHONE (919) 424-3710
FACSIMILE (919) 424-3711

• RICHARD E. JENKINS
JEFFREY L. WILSON
ARLES A. TAYLOR, JR.
DAVID P. GLOEKLER
GREGORY A. HUNT
JOHN A. LAMERDIN, Ph.D.
BENTLEY J. OLIVE
E. ERIC MILLS
JULIE A. BROADUS, Ph.D. (PATENT AGENT)

RECEIVED
JUL 11 2002
TC 1700

July 2, 2002

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the Commissioner of Patents, Washington, D.C. 20231 on July 2, 2002.

Bonnie S. Sheridan
Bonnie S. Sheridan
Date of Signature JULY 2, 2002

Commissioner for Patents
Washington, D.C. 20231

Re: Application Serial No. 09/997,162 for
NON-THERMIONIC SPUTTER MATERIAL TRANSPORT DEVICE, METHODS OF USE, AND MATERIALS PRODUCED THEREBY
Our File No. 297/104/2

Sir:

Please find enclosed the following:

1. Information Disclosure Statement (6 pages);
2. Form PTO/SB/08A (3 pages) in duplicate;
3. Form PTO/SB/08B (1 page) in duplicate;
4. Copies of the fifty-seven (57) references cited; and
5. A return-receipt postcard to be returned to our offices with the U.S. Patent and Trademark filing stamp thereon.

RECEIVED
JUL 11 2002
TC 1700

Please contact our offices if there are any questions.

The Commissioner is hereby authorized to charge any fees associated with the filing of this correspondence to Deposit Account Number **50-0426**.

Respectfully submitted,

JENKINS & WILSON, P.A.

David P. Gloekler
Registration No. 41,037
Customer No. Bar Code Label:

DPGbss
Enclosures

25297
PATENT TRADEMARK OFFICE

OIPE JC
JUL 08 2002
PATENT & TRADEMARK OFFICE

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the Commissioner of Patents, Washington, D.C. 20231 on July 2, 2002

Bonnie S. Sheridan

Bonnie S. Sheridan
Date of Signature July 2, 2002

RECEIVED
JUL 11 2002
TC 1700

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Cuomo et al.

Group Art Unit: 1741

Serial No.: 09/997,162

Examiner: Not Assigned

Filed: November 29, 2001

Docket No.: 297/104/2

Confirmation No.: 3621

For: NON-THERMIONIC SPUTTER MATERIAL TRANSPORT DEVICE, METHODS OF USE, AND MATERIALS PRODUCED THEREBY

* * * * * * * * * * * *

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with 37 C.F.R. 1.56, 1.97, and 1.98, applicants' undersigned attorney brings to the attention of the Patent and Trademark Office the following references. Copies of the references as well as Forms PTO/SB/08A and PTO/SB/08B are attached hereto. This is not to be construed as a representation that a search has been made or that a reference is relevant merely because cited.

A1) U.S. Patent Application Publication No. US 2001/0008656 to Tischler et al. discloses bulk single crystal gallium nitride and method of making same.

A2) U.S. Patent No. 6,288,417 to Nickel et al. discloses light-emitting devices including polycrystalline GAN layers and method of forming devices.

A3) U.S. Patent No. 6,265,289 to Zheleva et al. discloses methods of fabricating gallium nitride semiconductor layers by lateral growth from sidewalls into trenches, and gallium nitride semiconductor structures fabricated thereby.

A4) U.S. Patent No. 6,255,198 to Linthicum et al. discloses methods of fabricating gallium nitride microelectronic layers on silicon layers and gallium nitride microelectronic structures formed thereby.

A5) U.S. Patent No. 6,225,650 to Tadatomo et al. discloses a GAN group crystal base member having low dislocation density, use thereof and manufacturing methods thereof.

A6) U.S. Patent No. 6,221,684 to Sugawara et al. discloses a GAN based optoelectronic device and method for manufacturing the same.

A7) U.S. Patent No.6,177,688 to Linthicum et al. discloses pendeoepitaxial gallium nitride semiconductor layers on silicon carbide substrates.

A8) U.S. Patent No. 6,153,010 to Kiyoku et al. discloses a method of growing nitride semiconductors, nitride semiconductor substrate and nitride semiconductor device.

A9) U.S. Patent No. 6,146,457 to Solomon discloses thermal mismatch compensation to produce free standing substrates by epitaxial deposition.

A10) U.S. Patent No. 6,066,205 to Hunter discloses growth of bulk single crystals of aluminum nitride from a melt.

A11) U.S. Patent No. 6,063,185 to Hunter discloses production of bulk single crystals of aluminum nitride, silicon carbide and aluminum nitride: silicon carbide alloy.

A12) U.S. Patent No. 6,045,612 to Hunter discloses growth of bulk single crystals of aluminum nitride.

A13) U.S. Patent No. 6,020,602 to Sugawara et al. discloses a GAN based optoelectronic device and method for manufacturing the same.

A14) U.S. Patent No. 5,972,109 to Hunter discloses growth of bulk single crystals of aluminum nitride.

A15) U.S. Patent No. 5,962,875 to Motoki et al. discloses a light emitting device, wafer for light emitting device, and method of preparing the same.

A16) U.S. Patent No. 5,954,874 to Hunter discloses growth of bulk single crystals of aluminum nitride from a melt.

A17) U.S. Patent No. 5,919,305 to Solomon discloses elimination of thermal mismatch defects in epitaxially deposited films through the separation of the substrate from the film at the growth temperature.

A18) U.S. Patent No. 5,915,194 to Powell et al. discloses a method for growth of crystal surfaces and growth of heteroepitaxial single crystal films thereon.

A19) U.S. Patent No. 5,876,573 to Moslehi et al. discloses a high magnetic flux cathode apparatus and method for high productivity physical-vapor deposition.

A20) U.S. Patent No. 5,858,086 to Hunter discloses growth of bulk single crystals of aluminum nitride.

A21) U.S. Patent No. 5,838,029 to Shakuda discloses a GAN-type light emitting device formed on a silicon substrate.

A22) U.S. Patent No. 5,786,606 to Nishio et al. discloses a semiconductor light-emitting device.

A23) U.S. Patent No. 5,679,152 to Tischler et al. discloses a method of making a single crystals GA*N article.

A24) U.S. Patent No. 5,620,557 to Manabe et al. discloses a sapphireless group III nitride semiconductor and method for making same.

A25) U.S. Patent No. 5,573,742 to Gebhardt discloses a method for the preparation of high purity aluminum nitride.

A26) U.S. Patent No. 5,556,519 to Teer discloses magnetron sputter ion plating.

A27) U.S. Patent No. 5,393,993 to Edmond et al. discloses a buffer structure between silicon carbide and gallium nitride and resulting semiconductor devices.

A28) U.S. Patent No. 5,356,608 to Gebhardt discloses preparation of a high purity aluminum nitride antenna window by organometallic pyrolysis.

A29) U.S. Patent No. 5,306,662 to Nakamura et al. discloses a method of manufacturing p-type compound semiconductor.

A30) U.S. Patent No. 5,290,393 to Nakamura discloses a crystal growth method for gallium nitride-based compound semiconductor.

A31) U.S. Patent No. 5,270,263 to Kim et al. discloses a process for depositing aluminum nitride (ALN) using nitrogen plasma sputtering.

A32) U.S. Patent No. 5,234,560 to Kadlec et al. discloses a method and device for sputtering of films.

A33) U.S. Patent No. 5,228,963 to Rose discloses a hollow-cathode magnetron and method of making thin films.

A34) U.S. Patent No. 5,073,245 to Hedgcoth discloses a slotted cylindrical hollow cathode/magnetron sputtering device.

A35) U.S. Patent No. 4,985,742 to Pankove discloses high temperature semiconductor devices having at least one gallium nitride layer.

A36) U.S. Patent No. 4,966,677 to Aichert et al. discloses a cathode sputtering apparatus on the magnetron principle with a hollow cathode and a cylindrical target.

A37) U.S. Patent No. 4,963,239 to Shimamura et al. discloses a sputtering process and an apparatus for carrying out the same.

A38) U.S. Patent No. 4,959,136 to Hatwar discloses a method for making an amorphous aluminum-nitrogen alloy layer.

A39) U.S. Patent No. 4,915,805 to Rust discloses a hollow cathode type magnetron apparatus construction.

A40) U.S. Patent No. 4,824,544 to Mikalesen et al. discloses a large area cathode lift-off sputter deposition device.

A41) U.S. Patent No. 4,727,047 to Bozler et al. discloses a method of producing sheets of crystalline material.

A42) U.S. Patent No. 4,637,853 to Bumble et al. discloses a hollow cathode enhanced plasma for high rate reactive ion etching and deposition.

A43) U.S. Patent No. 4,588,490 to Cuomo et al. discloses a hollow cathode enhanced magnetron sputter device.

A44) U.S. Patent No. 4,521,286 to Horwitz discloses a hollow cathode sputter etcher.

A45) U.S. Patent No. 4,431,473 to Okano et al. discloses an RIE apparatus utilizing a shielded magnetron to enhance etching.

A46) U.S. Patent No. 4,407,712 to Henshaw et al. discloses a hollow cathode discharge source of metal vapor.

A47) U.S. Patent No. 4,394,400 to Green et al. discloses a method and apparatus for depositing coatings in a glow discharge.

A48) U.S. Patent No. 3,716,759 to Scace et al. discloses an electronic device with thermally conductive dielectric barrier.

A49) U.S. Patent No. 3,609,471 to Scace et al. discloses a semiconductor device with thermally conductive dielectric barrier.

A50) U.S. Patent No. 3,600,218 to Pennebaker discloses a method for depositing insulating films of silicon nitride and aluminum nitride.

B1) Japanese Patent Publication No. 63-307254 to Matsushita Electric Ind. Co. Ltd. discloses an apparatus for forming thin oxide film.

C1) Huang et al., "Room-Temperature Ultraviolet Nanowire Nanolasers," Science, Vol. 292, p. 1897-1899, (June 8, 2001).

C2) Yoshizawa et al., "Growth of Self-Organized GaN Nanostructures on Al2O3(0001) by RF-Radical Source Molecular Beam Epitaxy," Jpn. J. Appl. Phys., Vol. 36, p. L459-L462, (April 15, 2997).

C3) Kusakabe et al., "Characterization of Overgrown GaN Layers on Nano-Columns Grown by RF-Molecular Beam Epitaxy," Jpn. J. Appl. Phys., Vol. 40, p. L192-L194, (March 1, 2001).

C4) Hashimoto et al., "Formation of GaN Nano-Column Structure by Nitridation," Materials Science Forumn, Trans Tech Publications, Ltd. (Switzerland), Vols. 264-268, p. 1129-1132, (July 1, 1998).

In addition to the foregoing references, the Examiner's attention is directed to U.S. Patent Application Serial No. 09/998,024, filed November 30, 2001 (Atty. Docket No. 1405/4); and U.S. Patent Application Serial No. 09/998,080 filed November 30, 2001 (Atty. Docket No. 297/105/2), copies of which are also enclosed herewith.

Early passage of the subject application to issue is earnestly solicited.

Although it is believed that no fee is due, the Commissioner is hereby authorized to charge any deficiencies of payment associated with the filing of this Information Disclosure Statement to Deposit Account No. **50-0426**.

Respectfully submitted,

JENKINS & WILSON, P.A.

Date: July 2, 2002 By: David P. Gloekler

David P. Gloekler
Registration No. 41,037

Suite 1400 University Tower
3100 Tower Boulevard
Durham, North Carolina 27707
Telephone: (919) 493-8000
Facsimile: (919) 419-0383

25297
PATENT TRADEMARK OFFICE

Customer No. Bar Code Label:

297/104/2 DPG/bss

Enclosures